

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptal202jxp

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	May 12	EXTEND option available in structure searching
NEWS	4	May 12	Polymer links for the POLYLINK command completed in REGISTRY
NEWS	5	May 27	New UPM (Update Code Maximum) field for more efficient patent SDIs in Caplus
NEWS	6	May 27	CAplus super roles and document types searchable in REGISTRY
NEWS	7	Jun 28	Additional enzyme-catalyzed reactions added to CASREACT
NEWS	8	Jun 28	ANTE, AQUALINE, BIOENG, CIVILENG, ENVIROENG, MECHENG, and WATER from CSA now available on STN(R)
NEWS	9	Jul 12	BEILSTEIN enhanced with new display and select options, resulting in a closer connection to BABS
NEWS	10	Jul 30	BEILSTEIN on STN workshop to be held August 24 in conjunction with the 228th ACS National Meeting
NEWS	11	AUG 02	IFIPAT/IFIUDB/IFICDB reloaded with new search and display fields
NEWS	12	AUG 02	CAplus and CA patent records enhanced with European and Japan Patent Office Classifications
NEWS	13	AUG 02	STN User Update to be held August 22 in conjunction with the 228th ACS National Meeting
NEWS	14	AUG 02	The Analysis Edition of STN Express with Discover! (Version 7.01 for Windows) now available
NEWS	15	AUG 04	Pricing for the Save Answers for SciFinder Wizard within STN Express with Discover! will change September 1, 2004
NEWS	16	AUG 27	BIOCOMMERCE: Changes and enhancements to content coverage
NEWS	17	AUG 27	BIOTECHABS/BIOTECHDS: Two new display fields added for legal status data from INPADOC
NEWS	18	SEP 01	INPADOC: New family current-awareness alert (SDI) available
NEWS	19	SEP 01	New pricing for the Save Answers for SciFinder Wizard within STN Express with Discover!
NEWS	20	SEP 01	New display format, HITSTR, available in WPIDS/WPINDEX/WPIX
NEWS	21	SEP 14	STN Patent Forum to be held October 13, 2004, in Iselin, NJ
NEWS EXPRESS		JULY 30	CURRENT WINDOWS VERSION IS V7.01, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004
NEWS HOURS			STN Operating Hours Plus Help Desk Availability
NEWS INTER			General Internet Information
NEWS LOGIN			Welcome Banner and News Items
NEWS PHONE			Direct Dial and Telecommunication Network Access to STN
NEWS WWW			CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation

of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 12:46:01 ON 21 SEP 2004

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 12:46:11 ON 21 SEP 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 20 SEP 2004 HIGHEST RN 748739-98-2

DICTIONARY FILE UPDATES: 20 SEP 2004 HIGHEST RN 748739-98-2

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> e manganese sesquioxide/cn

E1	1	MANGANESE SELENIUM OXIDE (MNSE2O5)/CN
E2	1	MANGANESE SELENIUM OXIDE (MNSEO3)/CN
E3	1 -->	MANGANESE SESQUIOXIDE/CN
E4	1	MANGANESE SESQUISULFIDE/CN
E5	1	MANGANESE SILICATE/CN
E6	1	MANGANESE SILICATE (MN1.98(SIO4))/CN
E7	1	MANGANESE SILICATE (MN2SI2O6)/CN
E8	1	MANGANESE SILICATE (MN2SIO4)/CN
E9	1	MANGANESE SILICATE (MN3SI10O23)/CN
E10	1	MANGANESE SILICATE (MN3SI2O7)/CN
E11	1	MANGANESE SILICATE (MN7SIO12)/CN
E12	1	MANGANESE SILICATE (MNSIO3)/CN

=> s e3

L1 1 "MANGANESE SESQUIOXIDE"/CN

=> d l1

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN
RN 1317-34-6 REGISTRY
CN Manganese oxide (Mn2O3) (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN Dimanganese trioxide
CN Manganese manganate (Mn2O3)
CN **Manganese sesquioxide**
CN Manganese trioxide
CN Manganese trioxide (Mn2O3)
CN Manganese(3+) oxide

CN Manganese(III) oxide
 CN Manganic oxide
 DR 39432-47-8
 MF Mn2 O3
 CI COM, MAN
 LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT,
 CHEMCATS, CHEMLIST, CIN, CSCHEM, DETHERM*, IFICDB, IFIPAT, IFIUDB,
 MRCK*, MSDS-OHS, NIOSHTIC, PROMT, RTECS*, TOXCENTER, USPAT2, USPATFULL,
 VTB
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)
 DT.CA Caplus document type: Conference; Dissertation; Journal; Patent; Report
 RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study);
 FORM (Formation, nonpreparative); OCCU (Occurrence); PREP (Preparation);
 PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES
 (Uses); NORL (No role in record)
 RLD.P Roles for non-specific derivatives from patents: ANST (Analytical
 study); BIOL (Biological study); PREP (Preparation); PRP (Properties);
 USES (Uses)
 RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological
 study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU
 (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT
 (Reactant or reagent); USES (Uses); NORL (No role in record)
 RLD.NP Roles for non-specific derivatives from non-patents: BIOL (Biological
 study); FORM (Formation, nonpreparative); PREP (Preparation); PROC
 (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

2969 REFERENCES IN FILE CA (1907 TO DATE)
 39 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 2971 REFERENCES IN FILE CAPLUS (1907 TO DATE)
 12 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplus
 COST IN U.S. DOLLARS
 FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
7.04	7.25

FILE 'CAPLUS' ENTERED AT 12:47:36 ON 21 SEP 2004
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
 COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is
 held by the publishers listed in the PUBLISHER (PB) field (available
 for records published or updated in Chemical Abstracts after December
 26, 1996), unless otherwise indicated in the original publications.
 The CA Lexicon is the copyrighted intellectual property of the
 American Chemical Society and is provided to assist you in searching
 databases on STN. Any dissemination, distribution, copying, or storing
 of this information, without the prior written consent of CAS, is
 strictly prohibited.

FILE COVERS 1907 - 21 Sep 2004 VOL 141 ISS 13
 FILE LAST UPDATED: 20 Sep 2004 (20040920/ED)

This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> file reg

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	1.76	9.01

FILE 'REGISTRY' ENTERED AT 12:50:02 ON 21 SEP 2004
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
 COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 20 SEP 2004 HIGHEST RN 748739-98-2
 DICTIONARY FILE UPDATES: 20 SEP 2004 HIGHEST RN 748739-98-2

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

```
=> e carbon monoxide/cn
E1      1      CARBON MONOSULFIDE-36S/CN
E2      1      CARBON MONOTELLURIDE/CN
E3      1 --> CARBON MONOXIDE/CN
E4      1      CARBON MONOXIDE (11CO)/CN
E5      1      CARBON MONOXIDE (12C17O)/CN
E6      1      CARBON MONOXIDE (12C18O)/CN
E7      1      CARBON MONOXIDE (13C17O)/CN
E8      1      CARBON MONOXIDE (13C18O)/CN
E9      1      CARBON MONOXIDE (13CO)/CN
E10     1      CARBON MONOXIDE (14CO)/CN
E11     1      CARBON MONOXIDE (C15O)/CN
E12     1      CARBON MONOXIDE (CO1+)/CN
```

```
=> s e3
L2      1 "CARBON MONOXIDE"/CN
```

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	4.85	13.86

FILE 'CAPLUS' ENTERED AT 12:50:26 ON 21 SEP 2004
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
 COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 21 Sep 2004 VOL 141 ISS 13
FILE LAST UPDATED: 20 Sep 2004 (20040920/ED)

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> s l2/pur
129390 L2
199338 PUR/RL
L3 288 L2/PUR
(L2 (L) PUR/RL)

=> s l1
L4 2971 L1

=> s l3 and l4
L5 1 L3 AND L4

=> d l5 ibib ab

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:372567 CAPLUS
DOCUMENT NUMBER: 140:359782
TITLE: Method for purifying carbon monoxide
INVENTOR(S): Ono, Hiroyuki; Isaki, Ryuichiro
PATENT ASSIGNEE(S): Nippon Sanso Corporation, Japan
SOURCE: U.S. Pat. Appl. Publ., 6 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004086447	A1	20040506	US 2003-694362	20031028
JP 2004149392	A2	20040527	JP 2002-319318	20021101
PRIORITY APPLN. INFO.:			JP 2002-319318	A 20021101

AB A method for purifying carbon monoxide, which can efficiently remove metal carbonyl in carbon monoxide while suppressing the production of carbon dioxide, is provided by selecting a metal oxide having proper oxidizability as a reactant with metal carbonyl. Carbon monoxide containing metal carbonyls as trace impurities is contacted with a remover containing manganese sesquioxide as a main component, thereby reacting metal carbonyl in carbon monoxide with said manganese sesquioxide to remove said metal carbonyl from said carbon monoxide.

=> s l4 and carbon monoxide
1075751 CARBON
23952 CARBONS
1084475 CARBON
(CARBON OR CARBONS)
161194 MONOXIDE
961 MONOXIDES
161706 MONOXIDE
(MONOXIDE OR MONOXIDES)
136278 CARBON MONOXIDE
(CARBON (W) MONOXIDE)
L6 155 L4 AND CARBON MONOXIDE

=> s l6 and purif?

745693 PURIF?
L7 13 L6 AND PURIF?

=> s 17 and remov? (4a) carbonyl
1114066 REMOV?
157620 CARBONYL
26631 CARBONYLS
165502 CARBONYL
(CARBONYL OR CARBONYLS)
1544 REMOV? (4A) CARBONYL
L8 1 L7 AND REMOV? (4A) CARBONYL

=> s 18 not 15
L9 0 L8 NOT L5

=> d 17 ibib ab 1-13

L7 ANSWER 1 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:372567 CAPLUS
DOCUMENT NUMBER: 140:359782
TITLE: Method for **purifying carbon monoxide**
INVENTOR(S): Ono, Hiroyuki; Isaki, Ryuichiro
PATENT ASSIGNEE(S): Nippon Sanso Corporation, Japan
SOURCE: U.S. Pat. Appl. Publ., 6 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004086447	A1	20040506	US 2003-694362	20031028
JP 2004149392	A2	20040527	JP 2002-319318	20021101
PRIORITY APPLN. INFO.:			JP 2002-319318	A 20021101

AB A method for **purifying carbon monoxide**, which can efficiently remove metal carbonyl in **carbon monoxide** while suppressing the production of carbon dioxide, is provided by selecting a metal oxide having proper oxidizability as a reactant with metal carbonyl. **Carbon monoxide** containing metal carbonyls as trace impurities is contacted with a remover containing manganese sesquioxide as a main component, thereby reacting metal carbonyl in **carbon monoxide** with said manganese sesquioxide to remove said metal carbonyl from said **carbon monoxide**.

L7 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:307348 CAPLUS
DOCUMENT NUMBER: 140:308370
TITLE: Ceramic carrier and ceramic catalyst body
INVENTOR(S): Ogata, Itsuhei; Nakanishi, Tomohiko; Andou, Yosiyasu; Yamada, Masanori; Yamada, Keiichi
PATENT ASSIGNEE(S): Nippon Soken, Inc., Japan; Denso Corp.
SOURCE: Ger. Offen., 25 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10339007	A1	20040415	DE 2003-10339007	20030825
JP 2004141852	A2	20040520	JP 2003-161225	20030605

PRIORITY APPLN. INFO.:

JP 2002-244582

A 20020826

JP 2003-161225

A 20030605

AB This invention refers to a ceramic carrier and ceramic catalyst body which are suitable for an NOx **purifn.** catalyst for a lean burn gasoline engine and/or a diesel engine, for a three-way catalyst, and/or for a diesel particulate filter (DPF). A cordierite carrier with a small thermal expansion and outstanding stability at high temperature is used in order

to prevent the diffusion of alkali metal compds. and alkaline earth metal compds. as catalyst components and to prevent a waste of the catalyst capacity and a degradation of the carrier. Catalyst stability needed to suppress the migration of the supported catalyst components is provided on the surface of a ceramic carrier which consists of a cordierite body with a honeycomb structure. The catalyst stabilization layer is formed from a material with a m.p. higher than the highest temperature of use, so that its surface potential becomes equivalent to a surface potential of a catalyst layer. In addition the catalyst stabilization layer prevents a migration of the alkali metal compds. and the alkaline earth metal compds. and maintains a stable catalyst capacity. Since the catalyst components do not move, the degradation which results from the reaction with cordierite is also prevented.

L7 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:977847 CAPLUS

DOCUMENT NUMBER: 140:257689

TITLE: Synthesis and properties of catalytic material from transition metals

AUTHOR(S): Gui, Ke; Qu, Long; Liu, Su-qin; Wang, Hong-xia; Huang, Ke-long

CORPORATE SOURCE: College of Chemical and Chemistry Engineering, Central South University, Changsha, 410083, Peop. Rep. China

SOURCE: Guangzhou Huaxue (2003), 28(3), 16-20

CODEN: GAHUFW; ISSN: 1009-220X

PUBLISHER: Zhongguo Kexueyuan Guangzhou Huaxue Yanjiuso

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB A new type of a catalytic material for **purifn.** of automotive exhaust gases was studied. The factors affecting the catalytic activity of this material such as calcination temperature, the period of calcination, etc. were investigated. The catalytic activity after SO2-poisoning was determined in a fixed-bed reactor by exposing the sample to the atmospheric of

160

mL/min SO2/air. The results reveals that at the optimum process for the experiment, the selective catalytic oxidation of CO by NO is over 85%, and the catalytic material has good aging characteristics.

L7 ANSWER 4 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:406786 CAPLUS

DOCUMENT NUMBER: 131:48526

TITLE: Catalysts for **purification** of engine exhaust gas containing nitrogen oxides, and apparatus for **purification** of exhaust gas

INVENTOR(S): Matsuda, Satoshi

PATENT ASSIGNEE(S): Jisedai Haigasus Shokubai Kenkyusho K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11169718	A2	19990629	JP 1997-347902	19971217
PRIORITY APPLN. INFO.:			JP 1997-347902	19971217

AB The catalysts comprise zeolites carrying Group VIIIB metals (Fe, Co, Ni, Ru, Rh, Pd, Ir, Pt), and Group VIB metals (Cr, Mo, W) loaded on supports. The exhaust gas **purifn.** apparatus is equipped with (A) the catalysts as a preliminary **purifn.** means, and (B) CO-oxidizing catalysts or NOx-**purifying** catalysts used with CO (as a reducing agent) as a post **purifn.** means. CO generated by **purifn.** of NOx with the claimed catalysts is **purified** in the apparatus

L7 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:305877 CAPLUS
DOCUMENT NUMBER: 131:61078
TITLE: Oxidative removal of CO contained in hydrogen by using metal oxide catalysts
AUTHOR(S): Teng, Y.; Sakurai, H.; Ueda, A.; Kobayashi, T.
CORPORATE SOURCE: Osaka National Research Institute, AIST, MITI, Osaka, 563, Japan
SOURCE: International Journal of Hydrogen Energy (1999), 24(4), 355-358
CODEN: IJHEDX; ISSN: 0360-3199
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Oxidative removal of a small quantity of CO from hydrogen atmospheric has been attempted by using catalysts consisting of 3d transition metal oxides. The oxidation of CO takes place in preference to that of H₂ on catalysts containing Co or Mn in a temperature range from 323-423 K. At higher temps.,

the oxidation of H₂ becomes to coincide and then the selectivity to the CO oxidation decreases. Hydrogenation of CO giving methane also occurs over the catalysts containing Ni or Co. Reduction of catalysts at high temps. might be the reason for the observed change in the catalytic properties. Among the catalysts tested, CoO showed the best performance and was considered to be one of the candidates for the refinement of the hydrogen fuel for the polymer-electrolyte type fuel cells.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:650205 CAPLUS
DOCUMENT NUMBER: 129:320168
TITLE: Apparatus for **purification** of exhaust gas from internal combustion engine
INVENTOR(S): Arakawa, Kenji; Matsuda, Satoshi; Tanba, Yusuke
PATENT ASSIGNEE(S): JisedaiHaigasus Shokubai Kenkyusho K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10263368	A2	19981006	JP 1997-73501	19970326
PRIORITY APPLN. INFO.:			JP 1997-73501	19970326

AB The apparatus for catalytic removal of NOx gases generated from internal combustion engine in the presence of excess oxygen atmospheric comprises catalysts in the up-stream of NOx flow for NOx removal by reduction using hydrocarbon as reducing agent and catalysts in the down-stream of the NOx flow for NOx removal by reduction using CO as reducing agent. The catalysts are selected from Fe, Co, Ni, Cu, Sn, Ce, Pt, Pd, and Ga, and the catalysts are supported on zeolites, alumina, silica, titania, zirconia,

zinc oxide, cobalt oxide, manganese oxide, ferric oxide, magnesia, and ceria.

L7 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1993:524067 CAPLUS
DOCUMENT NUMBER: 119:124067
TITLE: Oxidation catalysts for **purification** of exhaust gases
INVENTOR(S): Imai, Tetsuya; Tsukuda, Iwao
PATENT ASSIGNEE(S): Mitsubishi Heavy Industries, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05092137	A2	19930416	JP 1991-253657	19911001
PRIORITY APPLN. INFO.:			JP 1991-253657	19911001

AB The catalysts comprise Mn oxide-containing rare earth oxide-loaded mixed oxides of Ti and Al, preferably having honeycomb shapes. Alternatively, the catalysts consist of heat-resistant honeycomb substrates selected from cordierite, mullite, or crystalline mixed oxides of MgO, Al₂O₃ and TiO₂. The catalysts are useful for removal of CO and hydrocarbons from exhaust gases.

L7 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1985:8927 CAPLUS
DOCUMENT NUMBER: 102:8927
TITLE: **Purification** of nonoxidizing gas
PATENT ASSIGNEE(S): Ividen Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 59120222	A2	19840711	JP 1982-232444	19821227
JP 03051450	B4	19910806		
PRIORITY APPLN. INFO.:			JP 1982-232444	19821227

AB CO in a gas composed mainly of nonoxidizing gas is oxidized to CO₂ by a heavy-metal oxide. The CO₂ is removed by absorption. The **purified** gas is especially useful for calcining carbide ceramic sinters. Thus, Ar containing 1% CO was passed through an oxidation oven (400°) packed with powdered Cu₂O and then through an absorption tube filled with NaOH pellets. The final CO concentration was 100 ppm.

L7 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1977:176603 CAPLUS
DOCUMENT NUMBER: 86:176603
TITLE: Polyfunctional catalysts for the oxidation of gaseous hydrocarbons and **carbon monoxide** and for the reduction of nitrogen oxides
INVENTOR(S): Thompson, Charles E.; Mooney, John J.; Keith, Carl D.; Mannion, William A.
PATENT ASSIGNEE(S): Engelhard Minerals and Chemicals Corp., USA
SOURCE: Ger. Offen., 40 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent

LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2637198	A1	19770303	DE 1976-2637198	19760818
DE 2637198	C2	19890810		
GB 1561683	A	19800227	GB 1976-35085	19760823
DD 127678	C	19771005	DD 1976-194448	19760824
SE 7609423	A	19770228	SE 1976-9423	19760825
SE 446506	B	19860922		
SE 446506	C	19880126		
JP 52027088	A2	19770301	JP 1976-101499	19760825
FR 2321940	A1	19770325	FR 1976-25703	19760825
FR 2321940	B1	19830128		
AU 505606	B2	19791129	AU 1976-17133	19760825
CA 1083124	A1	19800805	CA 1976-259832	19760825
BR 7605638	A	19770809	BR 1976-5638	19760826
PL 107472	P	19800229	PL 1976-192024	19760826
BE 845625	A1	19770228	BE 1976-170168	19760827
NL 7702085	A	19780829	NL 1977-2085	19770225
			US 1975-608084	19750827

PRIORITY APPLN. INFO.:

AB The title catalysts, useful in exhaust gas **purifn.**, consist of oxides of Fe, Co, Ni, Cr, W, Zn, Cu, Mn, and/or Re on supports, upon which are deposited Pt group metals or their alloys. Thus, a monolithic mullite support (AlSi Mag 795) stabilized by Ce oxide and coated with Al₂O₃ is calcined at 500°, dipped in 50% Ni(NO₃)₂, dried at 125°, calcined at 500°, impregnated with an aqueous solution of H₂PtCl₆ 7 and RhCl₃ 0.6 g/L, fixed with H₂S, and dried and calcined as above to give a catalyst containing Ni₂O₃, 2.0, Pt 0.2, and Rh 0.011%. When tested at a fuel-air ratio .apprx.1:1, this catalyst converts NO_x .apprx.95, CO .apprx.90, and hydrocarbons 85-90%; compared with <50, .apprx.90, and <50, resp., for a conventional catalyst.

L7 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1972:517866 CAPLUS

DOCUMENT NUMBER: 77:117866

TITLE: Aluminum oxide-containing catalyst for oxidation of **carbon monoxide**

INVENTOR(S): Kuniyasu, Yoshihiro; Sakai, Toshiyuki; Ogami, Takashi

PATENT ASSIGNEE(S): Mitsui Mining and Smelting Co., Ltd.

SOURCE: Ger. Offen., 17 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2156414	A	19720713	DE 1971-2156414	19711113
JP 51023958	B4	19760720	JP 1970-103001	19701121
JP 51026395	B4	19760806	JP 1970-103002	19701121
			JP 1970-103001	19701121
			JP 1970-103002	19701121

PRIORITY APPLN. INFO.:

AB The heat properties of Bi oxide-, Mn oxide-, and (or) Pb oxide-containing oxidation catalysts for CO in exhaust gases were improved by adding 5-70] Al₂O₃. Thus, 50 parts catalyst containing MnO₂ 40, Mn₂O₃ 30, Cu 15, Bi₂O₃ 10, Bi₂O₅ 5] was mixed with 35 parts Al₂O₃ and 15 parts alumina cement (80] Al₂O₃). The mixture was compacted 5 sec at 400° and 2 metric tons/cm². The catalysts were treated with an exhaust gas containing 5.1] CO, 220 ppm hydrocarbons, and 50 ppm NO to give 0.4] CO and 70 ppm hydrocarbons.

L7 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1972:492459 CAPLUS

DOCUMENT NUMBER: 77:92459

TITLE: Forming process for catalytic packages for
purifying exhaust gases containing
carbon monoxide

INVENTOR(S): Kuniyasu, Yoshihiro; Sakai, Toshiyuki; Sakai, Hiroto

PATENT ASSIGNEE(S): Mitsui Mining and Smelting Co., Ltd.

SOURCE: Ger. Offen., 26 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2148837	A	19720510	DE 1971-2148837	19710930
JP 51023957	B4	19760720	JP 1970-85119	19700930
IT 939806	A	19730210	IT 1971-70014	19710913
SU 456398	D	19750105	SU 1971-1924145	19710922
SU 457202	D	19750115	SU 1971-1920528	19710922
SU 463252	D	19750305	SU 1971-1701059	19710922
AU 7133875	A1	19730329	AU 1971-33875	19710924
CA 986497	A1	19760330	CA 1971-124005	19710929
FR 2108746	A5	19720519	FR 1971-35322	19710930
GB 1369047	A	19741002	GB 1971-45620	19710930
PRIORITY APPLN. INFO.:			JP 1970-85119	19700930
			JP 1970-90297	19701013

AB The titled catalytic packages are obtained by compression of catalysts chosen from the group of MnO₂, Mn₂O₃, Pb₃O₄, and Bi₂O₃ together with binding materials such as alkaline earth or rare earth oxides or with transition elements or their oxides at temps. at which the catalytic qualities are not affected. The packages are such that the free flow of the gases to be **purified** is not seriously hindered. Thus, 5 kg MnO₂, 3 kg Pb₃O₄ ground to 200 mesh, and 2 kg Cu powder with <100 mesh particles heated to 400° in a hollow container and compressed at 4 tons/cm² gave a catalyst element with compression strength of 200-300 kg/cm², with a CO and hydrocarbon conversion rate of 90% after 300-hr testing in motor exhaust gas at 600°.

L7 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1972:158875 CAPLUS

DOCUMENT NUMBER: 76:158875

TITLE: Catalysts for **carbon monoxide**
removal from exhaust gases

INVENTOR(S): Sakai, Toshiyuki; Kobayashi, Shigehiko; Miyazaki, Kazuhide; Yamamoto, Michiaki

PATENT ASSIGNEE(S): Mitsui Mining and Smelting Co., Ltd.

SOURCE: Ger. Offen., 27 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2142001	A	19720406	DE 1971-2142001	19710821
JP 50015757	B4	19750607	JP 1970-84646	19700929
JP 50015758	B4	19750607	JP 1970-90231	19701014
US 3838069	A	19740924	US 1971-166558	19710727
CA 992526	A1	19760706	CA 1971-122009	19710902

GB 1369055	A	19741002	GB 1971-41464	19710906
AU 7133763	A1	19730329	AU 1971-33763	19710922
PRIORITY APPLN. INFO.:			JP 1970-84646	19700929
			JP 1970-90231	19701014

AB Catalysts containing 50-95 parts Mn oxides, 5-50 parts Bi oxides, and optionally 5-10 Al₂O₃, SiO₂, MgO, Fe₂O₃, Y₂O₃, CeO₂, and 5-60 (with respect to total Mn and Bi oxides) powdered Cu, Fe, Ni, or containing MnO₂ and Pb oxides and at least one of the compds. Bi oxides or Cu, Fe, Ni (5-40 with respect to total Mn and Pb oxides) were used for CO oxidation in exhaust gases. Thus, a catalyst of MnO₂ 40, Mn₂O₃ 40, and Bi₂O₅ 20 containing 20 powdered Cu was contacted with a gas containing CO 5, O 5, N 78, CO₂ 9, and 500 ppm hydrocarbons to give CO concentration 0, 0, 0, 0, 0.1, and 0.2 and hydrocarbon-concentration 20, 20, 20, 25, 25, and 30 ppm (with respect to hexane) after 10, 50, 100, 200, 300, and 400 hr, resp.

L7 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1971:521094 CAPLUS

DOCUMENT NUMBER: 75:121094

TITLE: Catalysts for **purifying** exhaust gases containing **carbon monoxide**

INVENTOR(S): Kobayashi, Shigehiko; Miyazaki, Kazuhide; Yamamoto, Michiaki

PATENT ASSIGNEE(S): Mitsui Mining and Smelting Co., Ltd.

SOURCE: Ger. Offen., 24 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	----	-----	-----
DE 2034053		19710715		
CA 939487			CA	
FR 2074854			FR	
GB 1339559			GB	
JP 47046253		19720000	JP	
JP 50015478		19750000	JP	
US 3715322		19730000	US	
PRIORITY APPLN. INFO.:			JP	19700110
			JP	19700504

AB Exhaust gases containing CO are **purified** through oxidation by a catalyst consisting of Mn oxide or a mixture of Mn oxides with Pb oxide(s), and oxides of the alkaline earths, transition elements, rare earths, or Al, Cu, and Fe singly or combined, thus the ratio of Mn oxide/Pb oxide may equal 1/9 to 9/1. A combustion catalyst or **purifying** catalyst may be made by adding a solution of a Mn compound or a Pb compound to a catalyst powder and kneading, or by applying the catalyst paste to a suitable support structure, using a binder. Also, catalyst pellets may be coated and sintered. The support structure may be Al, Cu, or Fe. In the compounding of the catalyst, oxides of the alkaline earths, of transition elements, of rare earths may be added as well as SiO₂, Al₂O₃, Al, Cu, and Fe. Such catalysts may be applied in the combustion zones of gasoline or gas burners.